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GROUP ART UNIT 2877

DATE: FEBRUARY 23, 2004

TO: EXAMINER LAYLA G. LAUGHMAN TOTAL NO. OF PAGES INCLUDING COVER: 5

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FROM: SCOTT F. DIRING

RE: RESPONSE TO OFFICE ACTION FILE: 2000.072000/SFD
DATED 11-21-03

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ORIGINAL: ☐ WILL FOLLOW ☒ WILL NOT FOLLOW

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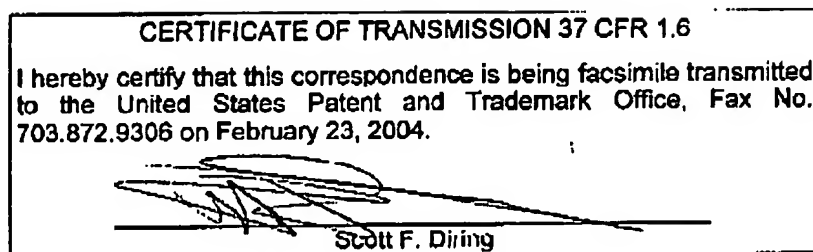
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FEB 23 2004

OFFICIAL**PATENT****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:
MARILYN I. WRIGHT, KEVIN R.
LENSING, AND J. BROCK STIRTON

Serial No.: 10/034,790

Filed: 12/27/2001

For: METHOD AND APPARATUS FOR
IDENTIFYING MISREGISTRATION IN A
COMPLIMENTARY PHASE SHIFT
MASK PROCESS

Group Art Unit: 2877

Examiner: LAYLA G. LAUCHMAN

Atty. Dkt. No.: 2000.072000/SFD

RESPONSE TO OFFICE ACTION DATED NOVEMBER 21, 2003

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This paper is submitted in response to the Office Action dated November 21, 2003 for which the three-month date for response is February 21, 2004, which falls on a Saturday thereby extending the period for response to February 23, 2004. It is believed that no fee is due; however, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be required for any reason, the

Director is authorized to deduct said fees from Advanced Micro Devices, Inc. Deposit Account No. 01-0365/TT4372. Reconsideration of the application is respectfully requested.

Claims 1, 7-12, 14, 20-23, 25, 31-34, 36, 42-50, and 54-61 stand rejected under the judicially created doctrine of obvious type double patenting over United States Patent No. 6,458,605 (Stirton). Claims 2-6, 13, 15-19, 24, 26-30, 35, 37-41, and 51-53 stand rejected under the judicially created doctrine of obvious type double patenting over Stirton in view of United States Patent No. 6,433,878 (Niu). Claims 1, 7-12, 14, 20-23, 25, 31-34, 36, 42-50, and 54-61 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Stirton.

The invention, as set forth in independent claims 1, 14, 25, 36, 50, and 59, includes the general feature of illuminating a wafer having a first grating structure and a second grating structure formed in a photoresist layer to determine misregistration therebetween. The first and second grating structures are formed in a common photoresist layer, as illustrated below in Figure 1. For example, as set forth in claim 3, the first grating structure 10 may be formed using a phase shift photomask, and the second grating structure 20 may be formed using a binary photomask.

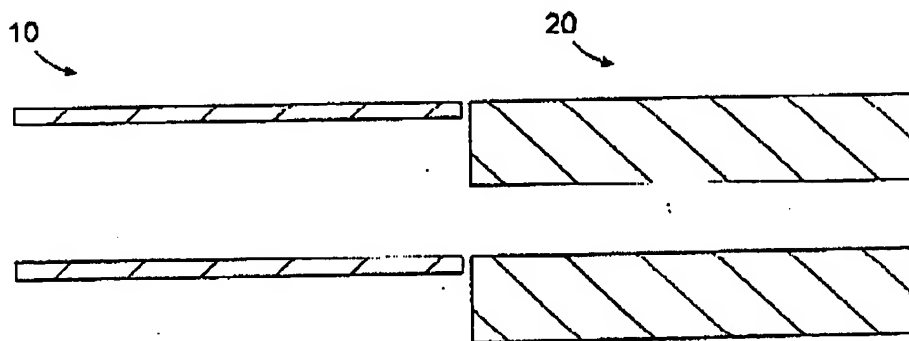


Figure 1

Stirton, in contrast, measures misregistration between a first grating structure 30 and a second grating structure 40 overlying the first grating structure 30. Hence, the grating structures 30, 40 of Stirton are formed in separate process layers, as illustrated below in Figure 2.

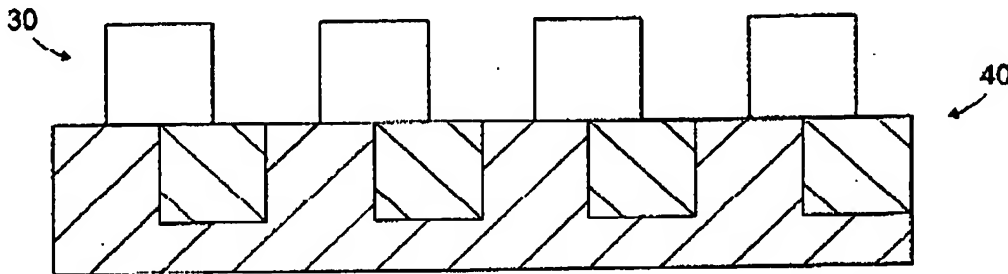


Figure 2

Stirton does not mention forming two grating structures in the same process layer and measuring misalignment therebetween. Alignment control for a two mask process for patterning the same layer is different than alignment control for a two layer process. The Office Action asserts that claims 1, 7-12, 14, 20-23, 25, 31-34, 36, 42-50, and 54-61 fall entirely within the scope of claims 1-6, 18-21, 31-34, 44-50, 54, 55, and 62-64 of Stirton. To the contrary, claims 1, 7-12, 14, 20-23, 25, 31-34, 36, 42-50, and 54-61 do not include the feature of a first grating structure and a second grating structure overlying the first grating structure.

For these reasons, the instant invention is neither anticipated nor obviated by Stirton. Applicant respectfully requests the double patenting rejections be withdrawn.

Regarding the 35 U.S.C. § 102(e) rejection, the Stirton fails to teach or suggest illuminating a wafer having a first grating structure and a second grating structure formed in a photoresist layer to determine misregistration therebetween. An anticipating reference by definition must disclose every limitation of the rejected claim in the same relationship to one

another as set forth in the claim. *In re Bond*, 15 U.S.P.Q.2d (BNA) 1566, 1567 (Fed. Cir. 1990). "[I]t is incumbent upon the examiner to identify wherein each and every facet of the claimed invention is disclosed in the applied reference." *Ex parte Levy*, 17 U.S.P.Q.2d (BNA) 1461, 1462 (Pat. & Tm. Off. Bd. Pat. App. & Int. 1990). Accordingly, claims 1, 14, 25, 36, 50, 59, and all claims depending therefrom, are allowable. Applicants respectfully request the rejection of these claims be withdrawn.

The Examiner is invited to contact the undersigned attorney at (608) 833-0748 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,



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Date: February 23, 2004